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Multiple channel communication method for spread spectrum system - determining first number of traffic channels required to transmit communication signal at data rate and second set of channels, and selecting one of channels after comparison

Patent Assignee: MOTOROLA INC

Inventors: BRUCKERT E; BRUCKERT E J; SEXTON T A

Patent Family (11 patents, 23 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1997026726	A1	19970724	WO 1996US19016	A	19961126	199735	B
EP 815665	A1	19980107	EP 1996943532	A	19961126	199806	E
			WO 1996US19016	A	19961126		
BR 199607788	A	19980707	BR 19967788	A	19961126	199834	E
			WO 1996US19016	A	19961126		
US 5781583	A	19980714	US 1996589177	A	19960119	199835	E
JP 11502690	W	19990302	WO 1996US19016	A	19961126	199919	E
			JP 1997525983	A	19961126		
KR 1998703083	A	19980905	WO 1996US19016	A	19961126	199938	E
			KR 1997706492	A	19970918		
JP 3213328	B2	200111002	WO 1996US19016	A	19961126	200164	E
			JP 1997525983	A	19961126		
CN 1179246	A	19980415	CN 1996192701	A	19961126	200220	E
KR 291535	B	20010601	WO 1996US19016	A	19961126	200225	E
			KR 1997706492	A	19970918		
CA 2214809	C	20020924	CA 2214809	A	19961126	200271	E
			WO 1996US19016	A	19961126		
CN 1080048	C	20020227	CN 1996192701	A	19961126	200514	E

Priority Application Number (Number Kind Date): US 1996589177 A 19960119

Patent Details

Patent Number	Kind	Language	Pages	Drawings	Filing Notes
WO 1997026726	A1	EN	29	6	
National Designated States,Original	BR CA CN JP KR				

Regional Designated States,Original	AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE			
EP 815665	A1	EN		PCT Application WO 1996US19016 Based on OPI patent WO 1997026726
Regional Designated States,Original	DE FR			
BR 199607788	A	PT		PCT Application WO 1996US19016 Based on OPI patent WO 1997026726
JP 11502690	W	JA	28	PCT Application WO 1996US19016 Based on OPI patent WO 1997026726
KR 1998703083	A	KO		PCT Application WO 1996US19016 Based on OPI patent WO 1997026726
JP 3213328	B2	JA	13	PCT Application WO 1996US19016 Previously issued patent JP 11502690 Based on OPI patent WO 1997026726
				PCT Application

KR 291535	B	KO	WO 1996US19016 Previously issued patent KR 98703083
CA 2214809	C	EN	Based on OPI patent WO 1997026726 PCT Application WO 1996US19016 Based on OPI patent WO 1997026726

Alerting Abstract: WO A1

The method for transmitting a communication signal having a data rate over a number of spread spectrum traffic channels involves determining a first set of traffic channels for transmitting the communication signal at the data rate. A second number of channels are determined to be available for transmitting the communication signal. The two sets of channels are compared.

In response to the comparison, a first traffic channel is selected for transmitting a first part of the signals. A second traffic channel is selected for transmitting a second portion of the communication signal and is selected from the second number of traffic channels available for transmitting the communication signal. The selection of the first channel is non-deterministic of the selection of the second traffic channel.

ADVANTAGE - Identities of channels used for transmission of data portions are not related.

International Classification (Main): H04J-013/04**International Patent Classification**

IPC	Level	Value	Position	Status	Version
H04B-0001/707	A	N		R	20060101
H04J-0011/00	A	I		R	20060101
H04J-0013/04	A	I	F	R	20060101
H04L-0001/00	A	I		R	20060101
H04Q-0007/38	A	I	L	R	20060101
H04B-0001/707	C	N		R	20060101
H04J-0011/00	C	I		R	20060101
H04J-0013/02	C	I	F	R	20060101
H04L-0001/00	C	I		R	20060101

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US Classification, Issued: 370-342000, 370-468000, 375-130000, 375-141000

US Classification, Issued: 375206, 375200, 375208, 370342

Original Publication Data by Authority

Brazil

Publication Number: BR 199607788 A (Update 199834 E)

Publication Date: 19980707

Assignee: MOTOROLA INC (MOTI)

Inventor: SEXTON T A BRUCKERT E

Language: PT

Application: BR 19967788 A 19961126 (Local application) WO 1996US19016 A 19961126 (PCT Application)

Priority: US 1996589177 A 19960119

Related Publication: WO 1997026726 A (Based on OPI patent)

Original IPC: H04J-13/04(A) H04B-1/707(B)

Current IPC: H04B-1/707(R,A,N,M,EP,20060101,20051008,A) H04B-1/707
(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00
(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04
(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00
(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38
(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

Canada

Publication Number: CA 2214809 C (Update 200271 E)

Publication Date: 20020924

Assignee: MOTOROLA INC (MOTI)

Inventor: SEXTON T A BRUCKERT E J

Language: EN

Application: CA 2214809 A 19961126 (Local application) WO 1996US19016 A 19961126 (PCT Application)

Priority: US 1996589177 A 19960119

Related Publication: WO 1997026726 A (Based on OPI patent)

Original IPC: H04B-1/69(A)

Current IPC: H04B-1/707(R,A,N,M,EP,20060101,20051008,A) H04B-1/707
(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00
(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04
(R,I,M,JP,20060101,20051008,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00
(R,I,M,EP,20060101,20051220,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38
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Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

China

Publication Number: CN 1080048 C (Update 200514 E)

Publication Date: 20020227

Assignee: MOTOROLA INC; US (MOTI)

Language: ZH

Application: CN 1996192701 A 19961126 (Local application)

Priority: US 1996589177 A 19960119

Current IPC: H04B-1/707(R,N,M,EP,20060101,20051008,A) H04B-1/707

(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00

(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04

(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00

(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38

(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4|CN 1179246 A (Update 200220 E)

Publication Date: 19980415

Assignee: MOTOROLA INC; US (MOTI)

Language: ZH

Application: CN 1996192701 A 19961126 (Local application)

Priority: US 1996589177 A 19960119

Current IPC: H04B-1/707(R,N,M,EP,20060101,20051008,A) H04B-1/707

(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00

(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04

(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00

(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38

(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

European Patent Office

Publication Number: EP 815665 A1 (Update 199806 E)

Publication Date: 19980107

**VERFAHREN UND VORRICHTUNG ZUR NACHRICHTENUBERTRAGUNG UBER
MEHRERE KANALE IN EINEM
SPREIZBANDSPEKTRUMNACHRICHTENUBERTAGUNGSSYSTEM METHOD AND SYSTEM
FOR COMMUNICATION OVER MULTIPLE CHANNELS IN A SPREAD SPECTRUM
COMMUNICATION SYSTEM PROCEDE ET SYSTEME DE TRANSMISSION SUR DES
CANAUX MULTIPLES DANS UN SYSTEME DE TRANSMISSION A SPECTRE ETALE**

Assignee: MOTOROLA, INC., 1303 East Algonquin Road, Schaumburg, IL 60196, US (MOTI)

Inventor: BRUCKERT, Eugene, J., 203 West Noyes, Arlington Heights, IL 60005, US
Thomas, A., 121 Westover Lane, Schaumburg, IL 60193, US

Agent: Morgan, Marc et al, Motorola Eur. Intel. Prop. Op., Midpoint, Alencon Link, Basingstoke,
Hampshire RG21 7PL, GB

Language: EN

Application: EP 1996943532 A 19961126 (Local application) WO 1996US19016 A 19961126 (PCT
Application)

Priority: US 1996589177 A 19960119

Related Publication: WO 1997026726 A (Based on OPI patent)

Designated States: (Regional Original) DE FR

Original IPC: H04J-13/04(A) H04B-1/707(B)

Current IPC: H04B-1/707(R,A,N,M,EP,20060101,20051008,A) H04B-1/707

(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00

(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04
(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00
(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38
(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

Original Abstract: A method for transmitting a communication signal (20) having a data rate over a plurality of spread spectrum traffic channels includes determining a first number of traffic channels required to transmit the communication signal at the data rate, and determining a second number of traffic channels (502) available for transmitting the communication signal (20). In response to a comparison of the first number of traffic to the second number of traffic channels, a first traffic channel (54) for transmitting a first portion of the communication signal (50, 51) and a second traffic channel (56) for transmitting a second portion of the communication signal (52, 53) are selected from the second number of traffic channels (502). The selection of the first traffic channel (54) is non deterministic of the selection of the second traffic channel (56).

Japan

Publication Number: JP 11502690 W (Update 199919 E)

Publication Date: 19990302

Assignee: MOTOROLA INC (MOTI)

Inventor: BRUCKERT E J SEXTON T A

Language: JA (28 pages)

Application: WO 1996US19016 A 19961126 (PCT Application) JP 1997525983 A 19961126 (Local application)

Priority: US 1996589177 A 19960119

Related Publication: WO 1997026726 A (Based on OPI patent)

Original IPC: H04J-13/04(A) H04Q-7/38(B)

Current IPC: H04J-13/04(A) H04Q-7/38(B)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4JP 3213328 B2 (Update 200164 E)

Publication Date: 20011002

Language: JA (13 pages)

Application: WO 1996US19016 A 19961126 (PCT Application) JP 1997525983 A 19961126 (Local application)

Priority: US 1996589177 A 19960119

Related Publication: JP 11502690 A (Previously issued patent) WO 1997026726 A (Based on OPI patent)

Original IPC: H04J-13/04(A) H04Q-7/38(B)

Current IPC: H04B-1/707(R,A,N,M,EP,20060101,20051008,A) H04B-1/707

(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00

(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04

(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00

(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38

(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

Current JP FI-Terms: H04B-7/26 109 M H04B-7/26 109 N H04J-13/00 G

Current JP F-Terms: 5K022 5K067 5K067AA21 5K067BB21 5K067CC10 5K067DD04 5K022EE01
5K067EE02 5K067EE10 5K022EE14 5K022EE21 5K022EE31 5K067EE65 5K067EE66 5K067HH22
5K067JJ12

Republic of Korea

Publication Number: KR 291535 B (Update 200225 E)

Publication Date: 20010601

Assignee: MOTOROLA INC (MOTI)

Language: KO

Application: WO 1996US19016 A 19961126 (PCT Application) KR 1997706492 A 19970918 (Local application)

Priority: US 1996589177 A 19960119

Related Publication: KR 98703083 A (Previously issued patent) WO 1997026726 A (Based on OPI patent)

Current IPC: H04J-13/04(A) H04B-1/707(B)|KR 1998703083 A (Update 199938 E)

Publication Date: 19980905

Assignee: MOTOROLA INC (MOTI)

Language: KO

Application: WO 1996US19016 A 19961126 (PCT Application) KR 1997706492 A 19970918 (Local application)

Priority: US 1996589177 A 19960119

Related Publication: WO 1997026726 A (Based on OPI patent)

Original IPC: H04J-13/04(A) H04B-1/707(B)

Current IPC: H04J-13/04(A) H04B-1/707(B)

United States

Publication Number: US 5781583 A (Update 199835 E)

Publication Date: 19980714

Method and system for communication over multiple channels in a spread spectrum communication system.

Assignee: Motorola, Inc., Schaumburg, IL, US (MOTI)

Inventor: Sexton, Thomas A., Schaumburg, IL, US Bruckert, Eugene J., Arlington Heights, IL, US

Agent: Creps; Heather L.

Language: EN

Application: US 1996589177 A 19960119 (Local application)

Original IPC: H04B-1/707(A) H04J-13/04(B)

Current IPC: H04B-1/707(R,A,N,M,EP,20060101,20051008,A) H04B-1/707

(R,N,M,EP,20060101,20051008,C) H04J-11/00(R,I,M,EP,20060101,20051008,A) H04J-11/00

(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04

(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00

(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38

(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

Current US Class (main): 375-146000

Current US Class (secondary): 370-342000 370-468000 375-130000 375-141000

Original US Class (main): 375206

Original US Class (secondary): 375200 375208 370342

Original Abstract: A method for transmitting a communication signal (20) having a data rate over a plurality of spread spectrum traffic channels includes determining a first number of traffic channels required to transmit the communication signal at the data rate, and determining a second number of traffic channels (502) available for transmitting the communication signal (20). In response to a comparison of the first number of traffic channels to the second number of traffic channels, a first traffic channel (54) for transmitting a first portion of the communication signal (50, 51) and a second traffic channel (56) for transmitting a second portion of the communication signal (52, 53) are selected from

the. second number of traffic channels (502). The selection of the first traffic channel (54) is non deterministic of the selection of the second traffic channel (56).

Claim: 1. A method for transmitting a communication signal having a data rate over a plurality of spread spectrum traffic channels, comprising: * (a) determining a first number of traffic channels required to transmit the communication signal at the data rate; * (b) determining a second number of traffic channels available for transmitting the communication signal; * (c) comparing the first number of traffic channels to the second number of traffic channels; * (d) selecting, in response to the comparison of the first number of traffic channels to the second number of traffic channels, a first traffic channel for transmitting a first portion of the communication signal, the first traffic channel being selected from the second number of traffic channels available for transmitting the communication signal; and * (e) selecting a second traffic channel for transmitting a second portion of the communication signal, the second traffic channel being selected from the second number of traffic channels available for transmitting the communication signal, the selection of the first traffic channel being non deterministic of the selection of the second traffic channel.

WIPO

Publication Number: WO 1997026726 A1 (Update 199735 B)

Publication Date: 19970724

METHOD AND SYSTEM FOR COMMUNICATION OVER MULTIPLE CHANNELS IN A SPREAD SPECTRUM COMMUNICATION SYSTEM

Assignee: MOTOROLA INC., US (MOTI)

Inventor: BRUCKERT, EUGENE, J., US SEXTON, THOMAS, A., US

Language: EN (29 pages, 6 drawings)

Application: WO 1996US19016 A 19961126 (Local application)

Priority: US 1996589177 A 19960119

Designated States: (National Original) BR CA CN JP KR (Regional Original) AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

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(R,I,M,EP,20060101,20051008,C) H04J-13/02(R,I,M,JP,20060101,20051220,C,F) H04J-13/04

(R,I,M,JP,20060101,20051220,A,F) H04L-1/00(R,I,M,EP,20060101,20051008,A) H04L-1/00

(R,I,M,EP,20060101,20051008,C) H04Q-7/38(R,I,M,JP,20060101,20051220,A,L) H04Q-7/38

(R,I,M,JP,20060101,20051220,C,L)

Current ECLA class: H04J-11/00 H04L-1/00A1 H04L-1/00A9B

Current ECLA ICO class: T04B-1:707M T04J-11:00B10 T04J-11:00B4

Original Abstract: A method for transmitting a communication signal (20) having a data rate over a plurality of spread spectrum traffic channels includes determining a first number of traffic channels required to transmit the communication signal at the data rate, and determining a second number of traffic channels (502) available for transmitting the communication signal (20). In response to a comparison of the first number of traffic to the second number of traffic channels, a first traffic channel (54) for transmitting a first portion of the communication signal (50, 51) and a second traffic channel (56) for transmitting a second portion of the communication signal (52, 53) are selected from the second number of traffic channels (502). The selection of the first traffic channel (54) is non deterministic of the selection of the second traffic channel (56).

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